Uniting Partners for a Legacy of Health:

Utah's Plan for the Secondary Prevention of Heart Disease and Stroke

Revision 1: 2007-2012

HEART DISEASE &
STROKE PREVENTION PROGRAM
UTAH DEPARTMENT OF HEALTH

www.hearthighway.org

Utah Department of Health, Bureau of Health Promotion, Heart Disease and Stroke Prevention Program

Cover design by Celsa Bowmen, 2007
Report design by Amy Bowler, 2007

The Impact of Heart Disease and Stroke in Utah 2007

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Suggested citation:

Utah Heart Disease and Stroke Prevention Program. The Impact of Heart Disease and Stroke in Utah. Salt Lake City, UT: Utah Department of Health 2007.

Acknowledgements

Uniting Partners for a Legacy of Health: Utah's Plan for the Secondary Prevention of Heart Disease and Stroke, Revision 1: 2007-2012 was developed by the staff of the Utah Heart Disease and Stroke Prevention Program with input from their many partners. The program staff wishes to thank the team from the Center for Public Policy and Administration at the University of Utah for their expertise in facilitating the work group discussions that were the basis of this plan. The program also thanks Ron Todd and Susan Ladd from the Division of Heart Disease and Stroke Prevention, the Centers for Disease Control and Prevention (CDC) for their support.

All of the contributors (listed in Appendix 4) are owed a huge debt of gratitude for attending the Strategic Planning Summit, providing their suggestions and insights on the prevention of heart disease and stroke in Utah and for providing feedback on the drafts of this plan.

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This publication was supported by Cooperative Agreement Number U50/CCU821337-05 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Table of Contents

Executive Summary

Cardiovascular disease (CVD) is the leading cause of death for both men and women in Utah and in the U.S. CVD claims the lives of more than 3,800 Utah residents every year. Despite declines in CVD mortality rates over the past several years, that number represents nearly one-third (29 percent) of all deaths in the state. Though the majority of the burden lies among those over age 65, accounting for 15 percent of all CVD death, the proportion of deaths that occur under age 65 has increased 2.5 percent in the past 10 years. This represents a substantial problem if the trend persists.

Uniting Partners for a Legacy of Health: Utah's Plan for Cardiovascular Health, 2002-2005, was written in 2001 to provide a plan for state partners to reduce risk factors for heart disease and stroke by implementing policy and environmental interventions. The Plan included goals, objectives and strategies for the secondary prevention of heart disease and stroke within three focus areas: awareness and visibility, policy, and capacity. While much progress was made toward implementing the recommendations, the work is not done.

In 2006, members of the Alliance for Cardiovascular Health in Utah (ACHU) convened to revise the state plan. Existing Alliance members were invited and new partners were recruited to represent a variety of internal and external partners. *Uniting Partners for a Legacy of Health: Utah's Plan for the Secondary Prevention of Heart Disease and Stroke, Revision 1: 2007-2012* is the result of the alliance discussions, and offers comprehensive, population-based strategies to address heart disease and stroke through policy and environmental approaches in the community, health care, and worksite settings. Additional strategies are set forth for the collection and dissemination of surveillance data. Where appropriate, the objectives and strategies from the original plan that were in progress but not completed, have been incorporated into the present plan.

The 2006 state plan developers made the decision to format the revised plan according to the CDC Division of Heart Disease and Stroke Prevention priority settings: community, health care, and worksite. Accordingly, workgroups were formed to develop goals, objectives and strategies for each of the settings. Within each setting, the plan is formatted with a long-term goal related to changes in the public's health status; objectives related to changes in the state's environment, policies, systems or behavior; and strategies which specify actions to be taken to meet the objectives. Additionally, a fourth section was written to outline goals, objectives and strategies for monitoring and reporting surveillance data for the state.

The goal for the community setting is to "Increase Utah's public awareness of: 1) the need for rapid response to reduce death and disability from stroke and heart attack; 2) the link between lifestyle choices and control of high blood pressure and high blood cholesterol; and 3) the importance of controlling high blood pressure and high cholesterol." Two objectives were developed to reach this goal:

- Between 2007 and 2012, develop and implement annual public awareness campaigns targeting Utah's priority populations (based on race/ethnicity, age, geography, population size, etc.) to inform and educate about the signs and symptoms of heart attack and stroke and that both are 9-1-1 medical emergencies.
- Between 2010 and 2012, develop and implement annual public awareness campaigns targeting Utah's priority populations (based on race/ethnicity, age, geography, population size, etc.) to inform and educate about the link between lifestyle choices and control of high blood pressure and high cholesterol.

The goal developed for the health care setting is to "Improve the quality of health care provided to Utahns with heart disease and stroke through policy, environmental and systems changes." Seven objectives were developed to reach this goal:

- Between 2007 and 2010, improve the quality of cardiovascular care provided to priority populations through implementation of the Care Model by all (13) of Utah's community health centers.
- Between 2007 and 2012, improve the quality of care provided for heart disease in Utah hospitals through implementation of the American Heart Association's "Get With The Guidelines-Coronary Artery Disease" and "Get With The Guidelines-Heart Failure" programs in at least 10 hospitals.
- Between 2007 and 2012, improve the quality of acute stroke care provided in Utah hospitals through the development and implementation of stroke protocols in 15 hospitals.
- Between 2007 and 2012, improve the outcomes for at least three HEDIS measures related to cardiovascular disease reported by at least four of Utah's commercial and Medicaid health plans.
- Between 2007 and 2012, provide at least eight continuing education sessions per year to Utah's primary health care providers on heart disease and stroke care.
- Between 2007 and 2012, reduce Utah hospital delay rates for stroke and heart attack.
- Between 2007 and 2012, improve outcomes for Utahns suffering from stroke through improvements in the continuity of care (i.e., from hospital discharge planning to rehabilitation).

The goal developed for the worksite setting is to "Reduce Utah employer health care expenditures and employee absences and disability related to heart disease and stroke." The following objectives were developed to reach this goal:

- Between 2007 and 2009, increase the number of Utah employers providing health education programs on heart disease and stroke for their employees.
- Between 2007 and 2012, increase the number of Utah employers who provide comprehensive insurance coverage for the prevention and treatment of cardiovascular disease.
- Between 2007 and 2012, increase the number of Utah employers who have made environmental and policy changes to make their worksites more heart healthy and stroke free (e.g., installed bike racks, instituted policies for exercise release time, paid gym memberships, improved vending machine offerings, instituted smoke-free policies, installed AEDs and trained employees in CPR and AED, calling 9-1-1 in the event of a heart attack or stroke, etc.).
- Between 2009 and 2011, increase the number of Utah employers who provide cardiovascular health screening and care management programs (e.g., hypertension management, diabetes management, cholesterol management) for their employees.
- The goal developed for the data/surveillance section is "Comprehensive heart disease and stroke data are readily available to assess, monitor and report the burden of heart disease and stroke in Utah." Two objectives were developed to reach this goal:
- Between 2007 and 2012, analyze and report data collected by the department of health from the following databases: CAHPS, Emergency Medical Services and pharmacy.
- By 2010, publish and widely distribute an updated burden report for heart disease and stroke in Utah.

The agencies responsible to facilitate the completion of each objective as well as partners, resources needed, strategies and evaluation methods are also delineated.

The Alliance has worked to garner buy-in among members at all levels to implement the plan. If the opportunities to build capacity, share resources, and offer innovative programs are realized, the burden of heart disease and stroke in Utah will be reduced.

Forward

We now have the scientific knowledge and communication technology to create a world in which the impact of heart disease and stroke could be significantly reduced. In such a world, policies, environments and systems would support heart health at all levels; individuals would be empowered to manage their blood pressure and cholesterol; individuals would have the knowledge and skill to access emergency response; state of the art emergency response would be available to all; evidence based standards of care would be implemented for those with heart disease and stroke; and disparities in health care would not exist.

In order to realize this vision, we must work together in a spirit of collaboration and partnership, making a commitment to implement strategies that will bring about long-term, sustainable policy, environment and system change. It will require all of us working together, including health care organizations, health professionals, businesses, community organizations, and government. Only by sharing our expertise, leveraging our resources, and extending creative application of heart disease and stroke prevention and treatment to the population as a whole will we reduce the burden and improve the outcomes for people with heart disease and stroke in Utah.

Uniting Partners for a Legacy of Health: Utah's Plan for the Secondary Prevention of Heart Disease and Stroke, Revision 1: 2007-2012 will guide those of us who have made the commitment to reduce the burden of heart disease and stroke, and help us coordinate and collaborate our efforts.

It is our hope that all who read this plan will join the effort and make this plan a reality.

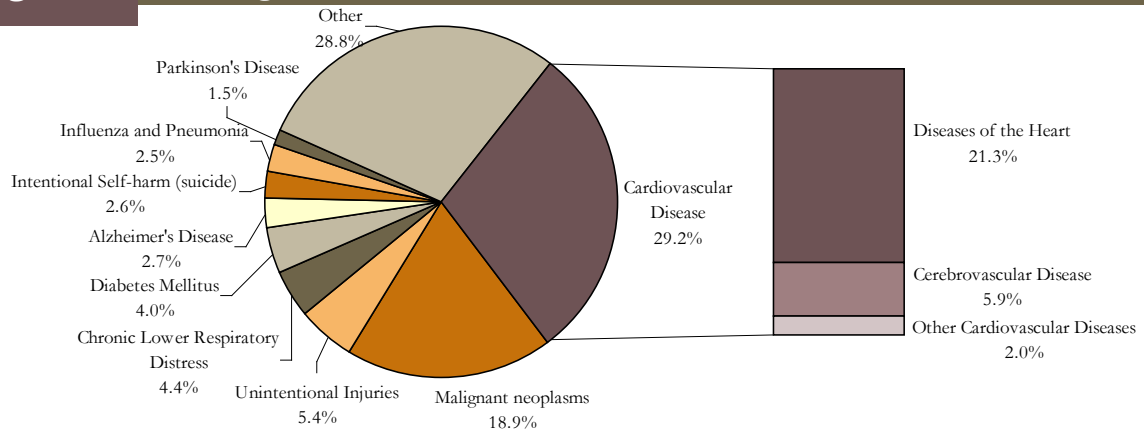
Overview of Cardiovascular Disease in Utah

Leading Cause of Death

Cardiovascular disease (CVD) is the leading cause of death for both men and women in Utah and in the U.S.

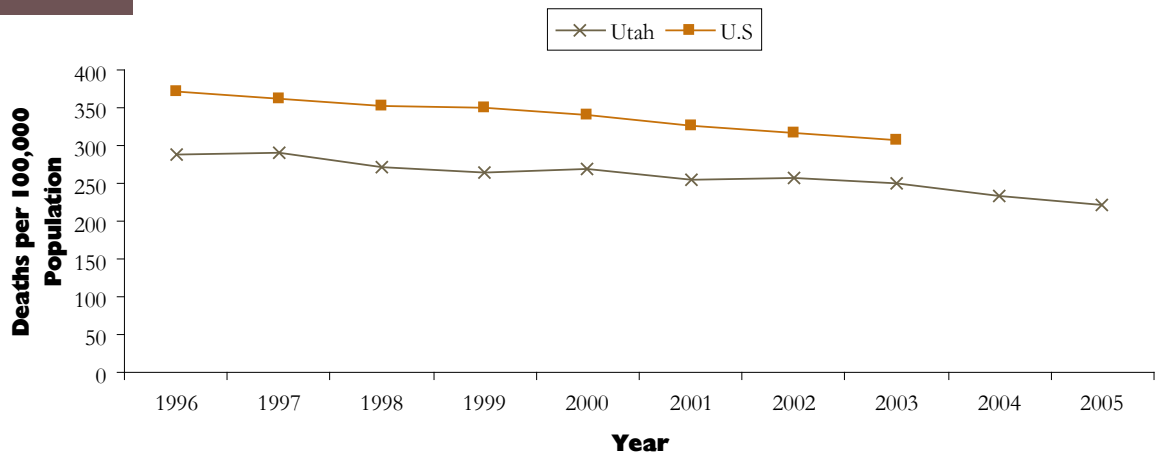
CVD is a complex set of diseases and conditions that affect the heart and blood vessels, including coronary heart disease, hypertensive diseases, cerebrovascular disease (stroke) and other diseases of the heart and peripheral vascular system. It is primarily the result of the interaction between multiple risk factors, a large number of which are modifiable. Due to its widespread prevalence and preventive nature, CVD is a primary target for public health interventions.

Figure 1 **Leading Causes of Death in Utah, 2005**



Source: Utah Death Certificate Database, Office of Vital Records, Utah Department of Health;
ICD codes taken from NCHS 50 leading causes of death

Figure 2 **Age-Adjusted Cardiovascular Disease Mortality by Year, Utah and U.S.**



Source: Utah Death Certificate Database, Office of Vital Records, Utah Department of Health
1996-1998: ICD 9 codes 390-448; 1999-2005: ICD 10 codes I00-I78
Rates prior to 1999 multiplied by ratio of 0.9981 for comparability

Each year CVD claims the lives of more than 3,800 Utah residents, and despite declines in CVD mortality rates over the past several years, nearly one-third (29 percent) of all deaths in Utah are CVD-related. About 15 percent of all CVD deaths occur in those under age 65. And though the majority of the burden lies among those over age 65, the proportion of deaths that occur under age 65 has increased 2.5 percent in the past 10 years. This represents a substantial problem if the trend persists.

Coronary heart disease, often referred to as coronary artery disease, is a condition in which blood flow to the heart is reduced by clogging or narrowing of the arteries that supply blood to the heart. When the blood supply is reduced, so is the oxygen carried to the heart tissue. The part of the heart not receiving oxygen begins to die, and can lead to angina (chest pain), myocardial infarction (heart attack) and sudden cardiac death. Coronary heart disease accounted for 40 percent of all CVD-related deaths in 2005, and 11 percent of all deaths.

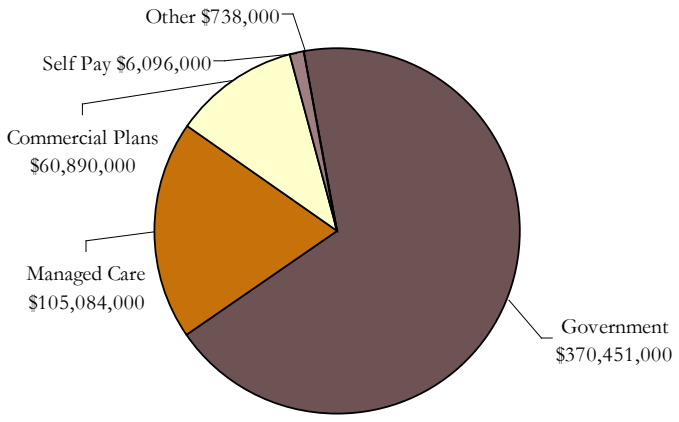
Cardiovascular disease also includes stroke (cerebrovascular disease). Stroke accounts for an average 800 deaths per year in Utah, and is the third leading cause of death for both men and women in the state. Stroke occurs when an artery in the brain is either ruptured or clogged by a blood clot or atherosclerosis (thickening of the arteries). Nerve cells in the affected part of the brain can die very quickly resulting in neurologic disability or death. In 2005, stroke accounted for 20 percent of CVD deaths in Utah, and six percent of all deaths in Utah.

While mortality from CVD is the leading cause of death for both sexes, men have higher CVD mortality rates compared to women. The age-adjusted mortality rate from CVD in 2005 was 235.2 per 100,000 for men and 209.8 per 100,000 for women. Other at-risk groups include ethnic groups such as Blacks, Hispanic persons, and American Indians. Those living in frontier counties in Utah also have higher mortality rates when compared to those living in urban and rural counties.

Economic and Individual Costs of Cardiovascular Disease

Mortality is just one side of the burden of CVD. Over three-quarters of those who have CVD do not die. In 2005 over 20,000 people were hospitalized with CVD-related illnesses. That's almost one in every 100 Utah residents, and that number has been increasing. This represents a huge cost to the individuals and the state. In 2006, the estimated direct and indirect costs of CVD in the U.S. were over $400 billion. Hospitalization charges alone in Utah were over $540 million in 2005 and two-thirds of those charges were paid for with government funds.

Figure 3 **Total Hospitalization Charge for Cardiovascular Disease by Primary Payer, Utah 2005**



Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health
ICD 9 codes 390-448

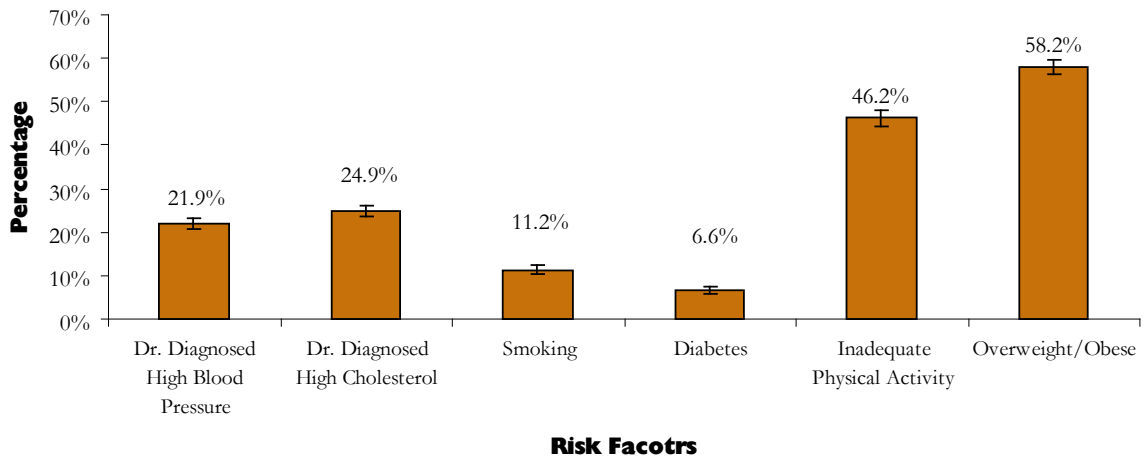
Overall costs are increasing not only due to increasing number of hospitalizations, but the increase in average charge per hospitalization as well. Between 2001 and 2005, the average charge per CVD hospitalization increased by 48 percent. This was higher than the increase for all hospitalizations (43 percent). As the number of hospitalizations and the charge for hospitalization increases, so will the economic burden of CVD for the state.

Cardiovascular disease also affects productivity as the condition is one of the leading causes of disability, leaving a large portion of those who experience CVD limited in their daily activities. Between 2001 and 2005, more than half of adults who had experienced a stroke, heart attack, or who had coronary heart disease reported being limited in their activities compared to less than 20 percent of the remaining adult population. Cardiovascular disease also has a substantial impact on the mental health of individuals. More than 15 percent of those who have had a stroke, heart attack, or coronary heart disease report at least seven days of poor mental health in the past month. Mental health problems can be just as disabling as physical impairments. Another existing gap is that many of those who experience heart attack or stroke do not receive proper rehabilitation. Less than 30 percent of those who had a heart attack between 2001 and 2005 attended rehab, and only 23 percent of those who had a stroke attended rehab. Rehabilitation is important for individuals who experience such events, and helps them develop skills to compensate for disabilities that might be caused as a result of the events.

Risk Factors for Cardiovascular Disease

Six major risk factors that largely contribute to the incidence of CVD are high blood pressure, high blood cholesterol, smoking, diabetes, poor physical activity levels, and being overweight or obese. Between 2001 and 2005, more than three-quarters of Utah adults had at least one risk factor for CVD and an alarming 47 percent had two or more risk factors. Overweight and obesity is the most prevalent risk factor among adults with, 58 percent of adult Utahns being overweight or obese in 2005.

Figure 4 **Age-Adjusted Prevalence of Cardiovascular Disease Risk Factors Among Adults 18 and Over, Utah, 2005**



Source: Utah Behavioral Risk Factor Surveillance Systems, Office of Public Health Assessment, Utah Department of Health

Among all six risk factors, the only one to decrease in prevalence since 2001 was smoking. Rates of adults with high blood pressure or inadequate levels of physical activity remain unchanged, and the percentage of adults who had high blood cholesterol, diabetes or who were overweight or obese all increased between 1996 and 2005. As the prevalence of risk factors continues to increase, so will the incidence of CVD.

The prevalence of risk factors persists among all age groups and sexes, but continues to be disproportionately shared among racial and ethnic groups. Lower socioeconomic status also tends to be associated with an increased prevalence of CVD-related risk factors. Native Americans, Hispanic persons, and those living in frontier counties in Utah each had higher age-adjusted rates of obesity and diabetes when compared to the entire state, and Native Americans and those in frontier counties also had higher age-adjusted rates of doctor-diagnosed high blood pressure.

Despite the decline in mortality from cardiovascular disease, there is still much work to be done to reduce future incidence of cardiovascular events. Efforts to reduce morbidity and mortality from CVD need to address the disparities that exist as well as the increasing prevalence of risk factors among Utahns.

The Plan

Progress on Utah's Plan for Cardiovascular Health, 2002-2005

Utah's Plan for Cardiovascular Health, 2002-2005 included goals, objectives and strategies for the secondary prevention of heart disease and stroke within three focus areas: Awareness and Visibility, Policy and Capacity. Appendix 5 includes detailed reports of the progress made impacting each of these areas. In general, there was much progress made toward implementing the recommendations. However, the work is not done. Where appropriate, the objectives and strategies from the original plan that were in progress but not completed have been incorporated into the present plan. Refer to Appendix 5 for more detail on the progress made on the initial plan.

Problem Statement

There is much burden and potential for impact in the areas of secondary prevention of heart disease and stroke within the health care system, worksites, and communities. Data from the 2001-2005 Behavioral Risk Factor Surveillance System (BRFSS) show that more than 60,000 Utahns have had a first heart attack, stroke, or diagnosis of coronary heart disease or angina. Additionally, more than 325,000 Utah adults age 18 or over had three or more risk factors for CVD. While these high risk populations will benefit most from the interventions described in this plan, all Utahns will ultimately benefit from strategies implemented to prevent heart disease and stroke.

Health Plan Employer Data Information Set (HEDIS) data show that of Utah managed care patients with high blood pressure, 72.1% had controlled their blood pressures one year prior. Of patients who had experienced a major cardiovascular event (heart attack, angina, coronary artery surgery, or other procedures to open blocked vessels), 65.1% had controlled their cholesterol levels. BRFSS data show that of the patients reporting having had a heart attack or stroke, less than one-quarter received rehabilitation services. And most Utah adults recognize chest pain as a symptom of heart attack and 84.8% know to call 9-1-1, many do not know the signs and symptoms of stroke or consider stroke a 9-1-1 emergency. In fact, in 1999, Utah was sixth highest in the nation in pre-transport stroke deaths (deaths occurring outside the emergency departments of hospitals).

Mission Statement

Impact the health and quality of life for Utahns by promoting policies and supports within the delivery systems of health care that will result in earlier detection and treatment of risk factors, heart attacks, and strokes, and prevent further cardiovascular events.

Note: For the purposes of this plan, secondary prevention will be defined as "educating, treating, and rehabilitating people with established disease, or who are at highest risk for a cardiovascular event, or who have had a heart attack or stroke, in order to prevent further cardiovascular events."

The Plan

The state plan developers decided to format the revised plan in accordance with the CDC Division of Heart Disease and Stroke Prevention priority settings: community, health care, and worksite. Accordingly, workgroups were formed to develop goals, objectives and strategies for each of the settings. Within each setting, the plan is formatted with a long-term goal related to changes in the public's health status; objectives related to changes in the state's environment, policies, systems or behavior; and strategies which specify actions to be taken to meet the objectives. Additionally, a fourth section was written to outline goals and objectives and strategies for monitoring and reporting surveillance data for the state.

There is much cross-over between the objectives of this plan and the U.S. Department of Health and Human Services' Healthy People 2010 (HP2010) objectives for improving health. Where appropriate, the associated HP2010 objective is referenced. Additionally, a cross-walk of the objectives in this plan with the HP2010 objectives can be found in Appendix 6. For each objective, the lead agency is identified and resources needed are listed.

Community Setting

Goal: Increase Utah's public awareness of: 1) the need for rapid response to reduce death and disability from stroke and heart attack; 2) the link between lifestyle choices and control of high blood pressure and high blood cholesterol; and 3) the importance of controlling high blood pressure and high cholesterol.

Objective 1:

Between 2007 and 2012, develop and implement annual public awareness campaigns targeting Utah's priority populations (based on race/ethnicity, age, geography, population size, etc.) to inform and educate about the signs and symptoms of heart attack and stroke and that both are 9-1-1 medical emergencies.
(HP2010 Obj #12-2, 12-4, 12-5, 12-8)

***Lead Agency**: Utah Heart Disease and Stroke Prevention Program*
***Partners:** Community-based organizations; Center for Multicultural Health; Utah Alliance for Cardiovascular Health Community Workgroup and affiliated organizations*
***Resources needed:** Funding for needs assessments, development of web pages, development of messages and materials, and distribution of messages; partnerships with leaders, health care providers and employers of Utah's priority populations; data analysis and reporting*

Strategies:

- Conduct a needs assessment to determine: 1) the levels of awareness among Utah's priority populations related to the signs and symptoms of heart attack and stroke and that both are 9-1-1 medical emergencies; and 2) appropriate messages to use with specific priority populations.
- Establish a diverse committee representing the priority populations to assist in campaign development process.
- Determine appropriate channels to reach priority populations.
- Develop public awareness messages and materials specific to each priority population based on the findings from the needs assessment and additional testing.
- Implement annual public awareness and grassroots campaigns using messages, materials and channels identified to reach priority populations.
- Develop content and materials on the www.hearthighway.org website for specific priority populations.
- Conduct an evaluation survey with the priority population to determine effectiveness of the message and increase in awareness.

Evaluation:

- Needs assessment completed and report written.
- Priority population participation on committee and campaign development documented.
- Analysis of needs assessment completed and channels determined.
- Materials developed and testing with the specific populations documented.
- Website content developed for at least one priority population.
- Public awareness and grass-roots campaigns documented.
- Frequency and reach of media messages documented.
- Targeted surveys to assess knowledge and attitude change among priority populations completed.
- Evaluation survey completed.

Objective 2:

Between 2010 and 2012, develop and implement annual public awareness campaigns targeting Utah's priority populations (based on race/ethnicity, age, geography, population size, etc.) to inform and educate about the link between lifestyle choices and control of high blood pressure and high cholesterol.
(HP 2010 Obj #12-11; 12-13; 12-14)

Lead Agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Community-based organizations; Center for Multicultural Health; Utah Alliance for Cardiovascular Health Community Workgroup and affiliated organizations*
Resources needed: *Funding for needs assessments, development of web pages, development of messages and materials, and distribution of messages; partnerships with leaders, health care providers and employers of Utah's priority populations; data analysis and reporting*

Strategies:

- Conduct a needs assessment to determine: 1) the levels of awareness among Utah's priority populations related to the link between lifestyle choices and high blood pressure and high cholesterol control; and 2) appropriate messages to use with specific priority populations.
- Establish a diverse committee representing the priority populations to assist in campaign development process.
- Determine appropriate channels to reach priority populations.
- Develop public awareness messages and materials specific to each priority population based on the findings from the needs assessment and additional testing.
- Develop content and materials on the www.hearthighway.org Web site for specific priority populations.
- Implement annual public awareness and grassroots campaigns using messages, materials and channels identified to reach priority populations.
- Identify possible resources for the un-insured and under-insured people in the priority population for blood pressure and cholesterol measurement and follow-up.

Evaluation:

- Needs assessment completed and report written.
- Priority population participation on committee and campaign developed and documented.
- Analysis of needs assessment completed and channels determined.
- Materials developed and testing with the specific populations documented.
- Web site content developed for at least one priority population.
- Public awareness and grassroots campaigns documented.
- Frequency and reach of media messages documented.
- Targeted surveys to assess knowledge and attitude change among priority populations completed.
- Inventory of available resources completed and distributed through at least two outlets.

Health Care Setting

Goal: Improve the quality of health care provided to Utahns with heart disease and stroke through policy, environmental and systems changes.

Objective 1:

Between 2007 and 2010, improve the quality of cardiovascular care provided to priority populations through implementation of the Care Model by all (13) of Utah's community health centers. (HP2010 Obj #12-9 through 12-16)

Lead agency: *Association for Utah Community Health (AUCH)*
Partners: *Utah Heart Disease and Stroke Prevention Program; community health centers; Utah Medical Association specialty societies*
Resources needed: *Assessment tools; electronic data collection and analysis; patient and provider education materials; quality improvement expertise; University of Utah Telehealth system; speakers; funding for assessment, testing and materials development*

Strategies:

- Provide resources to community health centers (CHC) to assess clinic systems, identify barriers, test solutions and evaluate progress improving quality of care for CVD. Include for example, systems for follow-up, medical records, medication compliance, patient self-management, community resources, etc.
- Assess CHC staff needs for content and training modality related to quality improvement and the Care Model.
- Develop and provide continuing education to meet identified needs of CHC staff.
- Develop and/or identify and obtain patient education resources that are culturally and linguistically appropriate for CHC patients.
- Explore the use of existing telecommunications to provide specialist consultation to patients in rural areas.

Evaluation:

- Number and type of resources provided to CHCs documented.
- CHC staff survey of resource usefulness completed.
- CHC staff needs assessment completed and report written.
- Number and type of continuing education sessions provided, participation and evaluation documented.
- Number and type of patient education resources developed/identified and provided to CHCs documented.
- Assessment of usefulness of patient education resources provided.
- Results of exploration of use of telecommunications for specialist consultation documented.

Objective 2:

Between 2007 and 2012, improve the quality of care provided for heart disease in Utah hospitals through implementation of the American Heart Association's "Get With The Guidelines-Coronary Artery Disease" (GWTG-CAD) and "Get With The Guidelines-Heart Failure" (GWTG-HF) programs in at least 10 hospitals.
(HP2010 Obj #12-3)

Lead agency: *American Heart Association*
Partners: *Utah Heart Disease and Stroke Prevention Program; Glaxo-Smith Kline*
Resources needed: *Funding for staff time, workshops, honoraria, travel and materials*

Strategies:

- Present information on the "Get With The Guidelines" (GWTG) programs to Utah hospital administrators who are eligible to participate in the programs.
- Hold annual workshops for hospital staff who participate in the programs.
- Provide technical assistance to interested hospital staff to facilitate implementation of the programs.
- Assess improvements in indicators collected by the hospitals.

Evaluation:

- Number and location of sessions held with hospital administrators and outcomes documented.
- Number of workshops held including participants, agenda, and evaluations documented.
- Type of technical assistance provided documented.
- Assessment of GWTG indicators for participating hospitals completed.

Objective 3:

Between 2007 and 2012, improve the quality of acute stroke care provided in Utah hospitals through the development and implementation of stroke protocols in 15 hospitals.
(HP2010 Obj #12-7)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Utah Stroke Task Force; health plans; Utah Hospital Association; University of Utah Stroke Telehealth Program*
Resources needed: *Support of Utah Hospital Association; funding for survey; staff to facilitate; high speed internet for hospitals*

Strategies:

- Assess readiness of Utah hospitals to treat stroke through a telephone survey.
- Use survey results to develop interventions.
- Explore the use of available telecommunications to provide acute stroke treatment in rural areas.

Evaluation:

- Hospital stroke assessment is completed, data analyzed and report written.
- Interventions developed, implemented and evaluated for effectiveness.
- Results of exploration into use of telecommunications for stroke treatment documented.

Objective 4:

Between 2007 and 2012, improve the outcomes for at least three HEDIS measures related to cardiovascular disease reported by at least four of Utah's commercial and Medicaid health plans. (HP2010 Obj #12-9 through 12-16)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Health plans; Utah Office of Public Health Data; Utah Diabetes Prevention and Control Program; HealthInsight*
Resources needed: *Staff time-HDSPP and health plans; funding for interventions and data collection, patient and provider education materials; evaluation expertise*

Strategies:

- With health plans, assess qualitative and quantitative data available through HEDIS cardiovascular measures (blood pressure control, cholesterol control, etc.).
- Identify cardiovascular measures to target for improvement.
- Develop, implement and evaluate interventions targeting providers, members, employers, etc, using evidence-based or promising practices.

Evaluation:

- Assessment of health plan data for cardiovascular indicators completed.
- Cardiovascular measures selected to target documented.
- Interventions developed, implemented and evaluated documented.

Objective 5:

Between 2007 and 2012, provide at least eight continuing education sessions per year to Utah's primary health care providers on heart disease and stroke care.
(HP2010 Obj #12-9 through 12-16)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Association for Utah Community Health; Utah Stroke Task Force; HealthInsight; health plans; Utah Medical Association and specialty societies; University of Utah; American Heart Association/ American Stroke Association; Utah Diabetes Prevention and Control Program*
Resources needed: *Staff time to coordinate; funding for assessment development, implementation, analysis and reporting; Utah Telehealth Network support; IT support; resources for participants; consultant time to write and submit papers; speaker time to present; evidence-based resources on the topics listed*

Strategies:

- Conduct an assessment of health care provider knowledge related to heart disease and stroke.
- Develop and provide continuing education sessions on stroke care through the annual Stroke Task Force Stroke Symposium.
- Based on the provider assessment, develop and provide quarterly continuing education sessions to providers through Utah's telehealth network in partnership with the Utah Diabetes Prevention and Control Program.
- Based on the provider assessment, develop and submit papers to Utah's medical societies to present information at their respective conferences (e.g. Utah Family Practice Association).
- Based on the provider assessment, work with health plans to incorporate heart disease and stroke care into the continuing education sessions they provide to their contracted providers.
- Based on the provider assessment, include topics such as use of a multi-disciplinary team to treat risk factors for heart disease and stroke, use of family health history to identify patient's risk status, secondary prevention guidelines for CAD, patient education on seeking treatment for heart attack and stroke, etc. in continuing education sessions.
- Based on provider assessment provide speakers and topics for trainings of providers at the AUCH annual meeting and other training opportunities.

Evaluation:
- Assessment of provider knowledge of heart disease and stroke completed and report written.
- Educational sessions provided including the number of participants, agendas, participant evaluations, and pre and post tests taken by participants documented.
- Papers submitted including topics, copy of the papers, dates and organizations to which they were submitted documented.
- Presentations made at provider conferences including presenter name, date, copy of presentation, name of conference, and number of participants documented.

Objective 6:

Between 2007 and 2012, reduce Utah hospital delay rates for stroke and heart attack. (HP2010 Obj #12-1, 12-3, 12-5, 12-7)
Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Utah Bureau of Emergency Medical Services; Utah Stroke Task Force; Utah Emergency Medical Services Association; emergency medical services providers; emergency medical technicians/paramedic trainers; emergency dispatch trainers; health plans; community-based organizations*
Resources needed: *Staff time to coordinate, develop and provide training; training resources, workshop funding, survey funding; sample tested surveys*

Strategies:
- Conduct a survey of emergency medical services (EMS) related to heart attack and stroke and identify areas for improvement.
- Update EMS stroke and heart attack protocols as needed.
- Based on needs assessment and up-to-date protocols, develop and provide continuing education sessions on stroke and heart attack for emergency dispatch personnel.
- Based on needs assessment and up-to-date protocols, develop and provide continuing education sessions on stroke and heart attack for emergency medical technicians and paramedics.
- Develop and implement interventions to educate individuals at highest risk of heart attack and stroke (minority populations, women, and those with previous history of heart attack or stroke) about the urgency of immediate emergency transport and treatment.
- Develop and implement interventions to educate family members, coworkers, and friends of individuals at highest risk of heart attack and stroke of the benefit of helping the patient call 9-1-1 rather than providing private transportation.

Evaluation:
- Survey results and analyses documented in written reports.
- Updated protocols documented.
- Continuing education provided to EMTs, paramedics and dispatchers including dates, location, names of trainers, number of participants, and evaluations documented.
- Educational interventions implemented including: messages, materials and channels used, numbers of materials distributed, numbers of media messages disseminated, partners, etc. documented.
- Targeted surveys to assess knowledge and attitude change among priority populations completed.
- Assessment of EMS data to evaluate changes in use of 9-1-1 completed.

Objective 7:

Between 2007 and 2012, improve outcomes for Utahns suffering from stroke through improvements in the continuity of care (i.e., from hospital discharge planning to rehabilitation). (HP2010 Obj #12-7)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Utah Stroke Task Force; Utah Department of Aging; American Heart Association; Intermountain Health Care; hospitals; Utah Stroke Task Force*
Resources needed: *Staff time needed for development and input on education material content; funding for printing and dissemination; staff time for facilitating links and partnerships between systems and organizations*

Strategies:

- Create education materials for stroke victims and their families to help them negotiate care and resources post discharge.
- Establish links between hospitals and care facilities to better aid stroke survivors in receiving referrals to rehabilitation post discharge.
- Strengthen partnerships between hospitals, aging services, rehabilitation and other agencies and programs in an effort to improve the quality of life and access to care for stroke survivors and their families.

Evaluation:

- Availability of resources for stroke survivors and their families documented.
- Increased number of partners working together to improve the quality of life for stroke survivors and their families.
- Increased number of stroke survivors being referred to rehabilitation post discharge.

Worksite Setting

Goal: Reduce the impact of heart disease and stroke on Utah workplaces by limiting employee absences, disability and health care expenditures related to heart disease and stroke

Objective 1:

Between 2007 and 2009, increase the number of Utah employers providing health education programs on heart disease and stroke to their employees.
(HP2010 Obj #12-2, 12-9 through 12-16)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Local health departments; health plans; Utah Council for Worksite Health Promotion; individual worksites; Salt Lake Chambers of Commerce Healthcare Committee; health insurance brokers*
Resources needed: *Staff time to coordinate and contact employers; Six Step guides; curricula*

Strategies:

- Distribute information on the importance of heart disease and stroke prevention programs in the workplace including the CDC Six Step Guide to employers.
- Develop and/or identify curricula for education programs (e.g. lunch and learns, email campaigns, etc.) and provide the curricula to employers.
- Provide technical assistance in the use and evaluation of the curricula to employers.
- Encourage employers to use health risk assessments (HRAs) and employee needs assessments (ENAs) to assess employee risk and employee needs in wellness programs.
- Based on employee risk, as documented in the HRAs, encourage employers to provide screening and referral for: blood pressure, cholesterol, fitness, nutrition and obesity.
- Encourage employers to provide counseling and follow-up for employees who participate in screening programs.
- Work with employers, private care management companies and health plans to develop and implement care management programs (e.g., hypertension management, diabetes management, cholesterol management) for their employees, as identified through HRAs and/or claims data.
- Encourage employers to provide incentives to employees who participate in the programs and reduce their risk for cardiovascular disease.

Evaluation:

- Number of employers who receive the brochure as well as date and method of distribution documented.
- Curricula developed/identified.
- Number of employers who receive technical assistance, how curricula was used and outcomes of the evaluations documented.
- Proportion of employers who provide comprehensive cardiovascular health screening and care management programs for their employees documented.
- Results of HRAs and ENAs documented.
- Care management program practices documented as a way of compiling best practice information for future partners.

Objective 2:

Between 2007 and 2012, increase the number of Utah employers who provide access to comprehensive health insurance coverage, including cardiovascular health screenings and care/disease management programs (e.g. hypertension, diabetes and cholesterol).
(HP2010 Obj #12-9, through 12-16)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: Health plans; *Utah Council for Worksite Health Promotion; insurance brokers*
Resources needed: *Staff time to coordinate and provide technical assistance to employers; Six Step guides; CDC insurance inventory*

Strategies:

- Distribute the CDC Six Step Guide to employers and recruit employers to evaluate their employee insurance coverage for cardiovascular disease prevention and treatment.
- Provide technical assistance to employers to complete the CDC inventory.
- Provide technical assistance to employers in evaluating the costs and benefits of improving insurance coverage, if needed.

Evaluation:

- Proportion of Utah employers that provide comprehensive insurance coverage for the prevention and treatment of cardiovascular disease documented.
- Number of Utah employers that use the CDC provided Insurance Evaluation form documented.

Objective 3:

Between 2007 and 2012, increase the number of Utah employers who have made environmental and policy changes to make their worksites more heart healthy and stroke -free (e.g., installed bike racks, instituted policies for exercise release time, offered paid gym memberships, improved vending machine offerings, instituted smoke-free policies, installed AEDs and trained employees in CPR, AED use, and developed policies on emergency response.).
(HP2010 Obj #12-4, 12-5, 12-11, 12-13, 12-14)

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Utah Council for Worksite Health Promotion; insurance brokers; health plans; Bureau of Health Promotion Healthy Weight Workgroup*
Resources needed: *Staff time to contact employers and provide technical assistance*

Strategies:

- Identify employers who are interested in instituting environmental and policy changes to improve their worksites.
- Provide sample policies and technical assistance to the employers to institute the policies.

Evaluation:

- Number of Utah employers who have made worksite environmental and policy changes to make them more heart healthy and stroke free documented.
- Number of policies created and samples collected.

Data/Surveillance

Goal: Comprehensive heart disease and stroke data are readily available to assess, monitor and report the burden of heart disease and stroke in Utah.

Objective 1:

Between 2007 and 2012, analyze and report data collected by the Utah Department of Health from the following databases: CAHPS, EMS, Pharmacy and HEDIS (Healthplan Employer Data Information Set).

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *Center for Health Data; Utah Department of Health, Utah Bureau of Emergency Medical Services, Office of Health Care Statistics*
Resources needed: *Contact information for distribution list; budget for printing and mailing; staff time to analyze and evaluate; input from partners*

Strategies:

- Meet with data stewards to establish data sharing agreements and obtain access to the data.
- Evaluate use of the data to fill gaps in knowledge regarding the burden of heart disease and stroke in Utah.
- Develop a plan to analyze and report the data.
- Write and distribute reports using CAHPS, EMS, Pharmacy data and HEDIS (Healthplan Employer Data Information Set).

Evaluation:

- Reports written and distributed.
- Usefulness of the reports assessed.
- Data used for program planning and evaluation.

Objective 2:

By 2012, publish and widely distribute an updated burden report for heart disease and stroke in Utah.

Lead agency: *Utah Heart Disease and Stroke Prevention Program*
Partners: *American Heart Association, Center for Health Data, Utah Bureau of Emergency Medical Services, health plans; hospitals*
Resources needed: *Staff time to analyze; staff time to coordinate and evaluate; input from partners on relevance of various data sources; staff time to write and review; contact information for distribution list; funding for printing and mailing*

Strategies:

- Develop and conduct an evaluation of the 2007 report.
- Review evaluations from previous report and incorporate changes/comments into the report outline.
- Identify all readily available data sources.
- Identify additional data to track on an ongoing basis.
- With input from users, identify key data elements needed to demonstrate the burden of CVD within the state and outline the report.
- Collect and analyze the data.
- Write text for the report.
- Publish and distribute the report.

Evaluation:

- Presence of a burden document by 2012.
- Number of times report accessed or downloaded from program Web site documented.
- Number of hard copies produced and distributed.
- Survey conducted on how report was used, and results compiled.
- Use of data in program planning and evaluation documented.

Evaluation Plan

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Community Objective 1							
Were the campaigns conducted annually?	Number or materials or mediums used during campaign	Program records	Count of materials and mediums	Annually	Calculate a sum total for all materials and mediums by year	HDSPP, ACHU	Year-end progress report
Has the knowledge of participants about the link between lifestyle and high blood pressure/high cholesterol changed?	Percent of priority population that could identify the link between lifestyle and risk factors	Priority population survey questions, focus group and interview results	Sample survey of priority populations, focus groups, interviews	Annually	Calculate a percentage and show progress across multiple years using t-test	Priority population partners, CMH, HDSPP	Brief report
How effective were the campaigns at tailoring their message to the different priority populations?	Feedback on cultural appropriateness of messages				Calculate percent that "agree" that the campaign message was tailored appropriately; should exceed 80%		
Which materials were more effective at delivering the message?	Ranking of each material by level of effectiveness				Calculate a sum total score for each intervention based on rankings		

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Community Objective 2							
Were the campaigns conducted annually?	Number of campaigns conducted each year	Program records	Count of campaigns conducted	Annually	Calculate sum total for all materials and mediums by year	HDSPP, ACHU	Year-end progress report
Has the knowledge of participants about the signs and symptoms of heart attack and stroke and the importance of calling 911 changed?	Percent of priority population that could identify the signs and symptoms and would call 911	- BRFSS - Priority population survey	- Telephone interview - Sample survey of priority populations	- Bi-annually - Annually	Calculate a percentage and show progress across multiple years using t-test	Priority population partners, CMH, HDSPP	Brief report
How effective were the campaigns at tailoring their message to the different priority populations?	Feedback on cultural appropriateness of messages	- Priority population survey, focus group and interview results.	- Sample survey of priority populations, focus groups, interviews	Annually	Calculate how many of those surveyed "agree" that the campaign message was tailored appropriately; should exceed 80%	Priority population partners, CMH, HDSPP	Brief report
Which materials were more effective at delivering the message?	Ranking of each material by level of effectiveness	Priority population survey, focus group and interview results.	Sample survey of priority populations, focus groups, interviews	Annually	Calculate a sum total score for each intervention based on rankings	Priority population partners, CMH, HDSPP	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Healthcare Setting Objective 1							
Are all 13 health centers implementing the model?	Number of centers implementing the model	Program records	Count of centers using the model	Dec 31, 2010	Compare number in 2007 to number in 2010	AUCH, HDSPP, ACHU	State plan progress report
Are all of the 13 centers fully implementing the model?	Number of areas in model that each center has addressed each year	Monthly reports	Extracted from monthly reports	Annually	Calculate an average percent of the model that the centers are implementing	AUCH, HDSPP, ACHU	State plan progress report
Has the quality of care improved?	Percent of patients with two blood pressure checks, percent who have blood pressure under control, percent CAD patients taking medication, percent with self-management goal, percent with fasting lipid panel, percent with LDL in control	PECS	Extracted from monthly reports	Quarterly	Regression test to see if change has been made over time	AUCH, HDSPP	Quarterly report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
How satisfied are the centers and AUCH with the partnership?	Level of satisfaction	Interview with AUCH	Interview notes	Annually	Qualitative analysis of comments	HDSPP	Verbal report
Healthcare Setting Objective 2							
Are 10 hospitals implementing the guidelines?	Number of hospitals implementing the guidelines	Program records	Count of hospitals	Dec 31, 2012	Compare number in 2007 to number in 2012	HDSPP, ACHU	State plan progress report
Have outcomes improved for those treated in the hospitals?	Percent of patients with CAD or HF discharged to home	Discharge database	Collected by CHCS	Dec 31, 2012	Compare percents across multiple years to show progress	HDSPP, hospitals	Brief report
What were the challenges the different hospitals faced in implementing the guidelines	List of obstacles faced in implementing the guidelines	Hospital survey	Self-administered internet survey	Dec 31, 2012	Qualitative review of the list	HDSPP, hospitals	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Healthcare Setting Objective 3							
How many hospitals are equipped to handle acute stroke events?	Number of hospitals equipped to handle acute stroke events	Acute stroke assessment	Self-administered written survey	Dec 31, 2012	Compare number in 2007 to number in 2012	HDSPP, hospital U of U	State plan progress report
Have the outcomes for stroke patients improved?	Percent of stroke patients discharged to home	Discharge database	Collected by CHCS	Dec 31, 2012	Compare percents across multiple years to show progress	HDSPP, hospital U of U, Stroke taskforce	Brief report
Healthcare Setting Objective 4							
Have three HEDIS measures improved for at least four health plans?	Number of measures that improved for each health plan	HEDIS	Collected by CHCS	Annually	Compare measures in 2007 to measures in 2012	HDSPP, ACHU	State plan progress report
What interventions were used to increase the measures?	List of interventions	Interviews with health plans	Interview notes	Annually	Qualitative review of list	HDSPP, health plans	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Healthcare Setting Objective 5							
How many education classes were conducted each year?	Number of classes conducted	Program records	Count of classes	Annually	Calculate the sum total for each year	HDSPP, UCWHP, ACHU	State plan progress report
How many participants attended each class?	Number of participants at each class	Program records	Count of participants	Calculated following each class	Compare the number of participants each year to the previous year	HDSPP, UCWHP	Brief report
How many sites were at each training?	Number of sites	Program records	Count of sites	Calculated following each class	Compare the number of sites each year to the previous year	HDSPP, UCWHP	Brief report
Was there a change in knowledge following the classes?	Change in knowledge following class	Pre- and post- test	Self-administered survey at the start and end of each class	Calculated following each class	Compare pre- and post- test scores using t-test	HDSPP, UCWHP	Brief report
Was the information provided at the trainings useful?	Level of satisfaction with training	Evaluations	Self-administered survey following training	Conducted after each training	Percent who "agree" or "very strongly agree" that the information from the classes was useful	HDSPP, UCWHP	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Healthcare Setting Objective 6							
Has EMS response for stroke and ACS improved?	Number of trained EMS personnel	EMS survey	Self-administered survey of agency providers	Annually	Compare the percentage of trained personnel in 2007 to percent in subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	Brief report
Has EMS response for stroke and ACS improved?	Number of EMS agencies with standard operating procedures for stroke and ACS	EMS survey	Self-administered survey of agency providers	Annually	Compare the percentage of EMS agencies with SOP for stroke and ACS in 2007 to percent in subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	Brief report
Has EMS response for stroke and ACS improved?	Number of EMS agencies that transport to hospital with acute stroke and ACS treatment capabilities	EMS survey	Self-administered survey of agency providers	Annually	Compare percent of agencies that transport to ACS or stroke designated hospitals in 2007 to percent in subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Have delays decreased?	Percent of ischemic stroke patients getting to the hospital within three hours of symptom onset	GWTG - Data outcome	Collected by GWTG	Annually	Compare the percent of patients getting to the hospital within three hours of onset in 2007 to percent in subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	Brief report
Is there an increased usage of 9-1-1 for acute stroke and ACS events?	Percent of adults that would call 9-1-1 for stroke or heart attack	BRFSS	Telephone interview	Bi-annually	Compare percentage of adults who would call 9-1-1 for stroke or heart attack in 2007 to percent in subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Healthcare Setting Objective 7							
Has the percent of patients who receive continuity of care increased?	Percent of patients who went to rehab following an acute event	BRFSS	Telephone survey	Bi-annually	Compare percentage of patients who went to rehab in 2007 to percent from subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	State plan progress report Brief Report
Were the materials distributed?	Percent of patients who remember receiving materials	Material evaluation survey	Self-administered patient survey	Annually	Compare percent of the patients remember receiving materials in 2007 to percent from subsequent years	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	State plan progress report Brief Report
How effective were the materials at educating patients?	Percent of patients that found the information useful	Material evaluation survey	Self-administered patient survey	Annually	Calculate percent who received materials who "agree" or "very strongly agree" that the information was useful	HDSPP, ACHU, EMS, Hospitals, Stroke Taskforce	State plan progress report Brief Report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Worksite Setting Objective 1							
How many employers are providing education to their employees?	Number of employers that request or download resources/materials	Program records	Count of materials/ resources disseminated	Annually	Compare number of sites in 2007 to number from subsequent years	HDSPP, ACHU, UCWHP	State plan progress report
What types of materials are being used?	Number of times a resource was requested	Program records	Count of materials/ resources disseminated	Annually	Tabulate number of times a resource was requested to show most used	HDSPP, ACHU, UCWHP	State plan progress report
Has the knowledge of the employees changed as a result of education?	Percent of worksites that feel employee knowledge has changed	Employer survey	Self-administered internet survey	Annually	Calculate percent of employers that felt employee knowledge had changed	HDSPP, ACHU, UCWHP	State plan progress report
How effective are the materials/resources?	- Percent of worksites that found the materials helpful - Comments received about materials	Employer survey	Self-administered internet survey	Annually	- Calculate percent of the worksites that "agree" or "very strongly agree" that the materials were helpful - Qualitative review of comments	HDSPP, ACHU, UCWHP	State plan progress report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Worksite Setting Objective 2							
How many plans are providing screening to employees?	Number of plans providing screening	Health plan survey	Self-administered internet survey	Dec 31, 2011	Compare number in 2007 to number in 2011	HDSPP, ACHU, UCWHP, Health plans	State plan progress report
What types of screening are the employees receiving?	List of screenings used by health plans	Health plan survey	Self-administered internet survey	Dec 31, 2011	Qualitative review of the list	HDSPP, ACHU, UCWHP, Health plans	Brief report
Has the health of the employees improved?	Percent of plans that say the health of the employees has improved	Health plan survey	Self-administered internet survey	Dec 31, 2011	Calculate the percent of health plans that "agree" or "strongly agree" that the health of employees has improved	HDSPP, ACHU, UCWHP, Health plans	Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Worksite Setting Objective 3							
How many worksites are implementing policies to provide comprehensive coverage?	Number of plans that request an insurance evaluation and/or resources from the program	Program records	Count of the number of worksites	Annually	Compare number of worksites in 2007 to number in subsequent years	HDSPP, ACHU, UCWHP, Health plans	State plan progress report
Worksite Setting Objective 4							
What were the environmental changes made by the worksites?	- Number of worksites that made environmental changes - Inventory of the changes made	- Program records - Worksite survey	Count of resources provided to worksites - Self-administered internet survey	Annually	Compare number who report making changes in 2007 to numbers in subsequent years - Qualitative review of inventory	HDSPP, ACHU, UCWHP, Health plans	- State plan progress report - Brief report
Which environmental changes were the easiest to implement and most effective	-List of barriers in implementation -Comments from worksites	Worksite survey	Self-administered internet survey	Annually	Qualitative review of comments	HDSPP, ACHU, UCWHP, Health plans	- State plan progress report - Brief report

Evaluation Questions	Indicators	Data Sources	Data Collection	Time Frame	Data Analysis	Communicating Results	
						To whom?	How?
Data/Surveillance Objectives 1 and 2							
Was a report created following analysis?	Presence of a report	Program records	Distribution list	Dec 31, 2010	- Compare percent in 2007 to percent in 2010 - Qualitative review of how the report was used	HDSPP, ACHU	State plan progress report
Was the information useful?	- Number of report recipients who used the report - List of ways the report was used - List of ways the report could be more useful	Report evaluation survey	Self-administered internet survey	Dec 31, 2010	- Calculate the percentage of recipients who used the report - Qualitative review of how the report was used - Summary on how the report could be more effective	HDSPP, ACHU	State plan progress report

Appendices

Appendix 1: Acronyms used
Appendix 2: Glossary
Appendix 3: References
Appendix 4: Contributors
Appendix 5: Progress on Utah's Plan for Cardiovascular Health, 2002-2005
Appendix 6: Cross-walk of Plan Objectives with Healthy People 2010 Objectives

Appendix 1: Acronyms Used

ACS: acute coronary syndrome
AED: automated external defibrillator
AHA: American Heart Association
ASA: American Stroke Association
AUCH: Association for Utah Community Health
BRFSS: Behavioral Risk Factor Surveillance System
CAD: coronary artery disease
CAHPS: Consumer Assessment of Health Plan Survey
CDC: Centers for Disease Control and Prevention
CHC: community health center
CHD: Center for Health Data, Utah Department of Health
CMH: Center for Multicultural Health
CVD: cardiovascular disease
EMS: Emergency Medical Services
EMT: emergency medical technician
ENA: employee needs assessment
GWTG: Get with the Guidelines
HDSPP: Utah Heart Disease and Stroke Prevention Program
HEDIS: Healthplan Employer Data Information Set
HF: heart failure
HP: Healthy People
HRA: health risk assessment
UCWHP: Utah Council for Worksite Health Promotion
UDOH: Utah Department of Health
UMA: Utah Medical Association

Appendix 2: Glossary

Access- An individual's ability to obtain appropriate health care services. Barriers to access can be financial (insufficient monetary resources), geographic (distance to providers), organizational (lack of available providers) and sociological (e.g., discrimination, language barriers). Efforts to improve access often focus on providing or improving health coverage.

Acute Care- Medical treatment given to individuals whose illnesses or health problems are short-term (usually under 30 days) or episodic. Acute care facilities are those hospitals that mainly serve persons with short-term health problems.

Atherosclerosis- A disease process in which cholesterol, calcium, and blood clotting materials build up on the inner walls of the arteries. Atherosclerosis narrows arteries and causes them to harden, thicken, and become less elastic.

ATP-III- The Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III, or ATP III) presents the NCEP's updated clinical guidelines for cholesterol testing and management. The ATP III guidelines provide detailed information on topic areas such as classification of lipids and lipoproteins, coronary heart disease (CHD) risk assessment, lifestyle interventions, drug treatment, specific dyslipidemias, and adherence issues. Recommendations for special populations such as patients with CHD, patients at high risk for developing CHD, patients with diabetes, women, older Americans, young adults, and racial and ethnic groups are provided.

Automated external defibrillator (AED)- A small, lightweight device that analyzes a person's heart rhythm (through special pads placed on the torso) and can detect ventricular fibrillation, also referred to as sudden cardiac arrest. The device prompts the operator to deliver a harmless electrical shock if needed. AEDs are designed to be used by lay rescuers or first responders.

Blood pressure- the force that blood exerts on the walls of the arteries as it is pumped through them.

- **Systolic blood pressure**- the greater of the two numbers in a blood pressure reading. This number represents the pressure in the arteries when the heart's ventricles are contracting.
- **Diastolic blood pressure**- The lower of the two numbers recorded in a blood pressure reading. This number represents the pressure in the arteries when the heart's ventricles are relaxed between beats and are refilling with blood.

Behavioral Risk Factor Surveillance System (BRFSS)- The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States annually since 1984. Conducted by the 50 state health departments as well as those in the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands with support from the CDC, BRFSS provides state-specific information about issues such as asthma, diabetes, health care access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use, and more.

Cardiac arrest-The sudden stopping of heartbeat and cardiac function due to electrical malfunction of the heart and resulting in the loss of effective circulation.

Cardiovascular disease (CVD)- refers to the class of diseases that involve the heart and/or blood vessels (arteries and veins).

Cerebrovascular disease- damage to the blood vessels in the brain that may result in a stroke. The blood vessels can become blocked because of fat deposits, or a wandering blood clot, blocking the flow of blood to a part of the brain. Sometimes, the blood vessels may leak, break, or burst, resulting in a hemorrhagic stroke. People with diabetes are at higher risk of cerebrovascular disease.

Care Model-model for improvement which identifies the essential elements of a health care system in order to encourage high-quality chronic disease care. The elements that are targeted are: community, health system, self-management support, delivery system design, decision support, and clinic information systems. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. The model can be applied to a variety of chronic illnesses, health care settings and target populations. Overall, we expect healthier patients, more satisfied providers and cost savings.
Improving Chronic Illness Care The Chronic Care Model
(http://www.improvingchroniccare.org/change/index.html).

Comprehensive worksite health promotion- Refers to programs that are offered to improve employee health, decrease healthcare costs, reduce absenteeism, and increase productivity. These programs may involve a combination of policy, environmental, and educational approaches including: (1) health risk assessments and medical screenings to identify and refer high risk employees for treatment, (2) follow-up one-on-one risk factor education and counseling, (3) health education classes or workshops, support groups, or web-based tools with individual goal setting, (4) incentives to motivate employees to participate and comply with prevention and treatment measures, (5) heart and stroke prevention messages to employees throughout the organizations, (6) accessible blood pressure monitors and automated external defibrillators, (7) heart-healthy and low-cost cafeteria and vending machine foods and beverages with point-of-purchase nutrition information, (8) smoke-free policies (e.g., smoke-free campus, bans on smoking in company vehicles), (9) policies to allow employees to use work time for health promotion activities, (10) clearly marked walking paths and accessible places to exercise, and signage to encourage stair use, (11) mentoring programs with employees who have made successful heart healthy lifestyle changes, and (12) partnerships with larger wellness programs in the community.

Chronic care- Treatment and care given to individuals whose health problems are long term and continuing. Rehabilitation facilities, nursing homes, and mental hospitals may be considered chronic care facilities.

Chronic disease- A disease with one or more of the following characteristics: permanence, leaves residual disability, caused by non-reversible pathological alternation, requires special training of the patient for rehabilitation, or may require a long period of supervision, observation, or care.

Continuum of care- A comprehensive set of services ranging from preventive and ambulatory services to acute care to long term and rehabilitative services. By providing continuity of care, the continuum focuses on prevention and early intervention for those who have been identified as high risk and provides easy transition from service to service as needs change.

Community Health Center (CHC)- provide health care regardless of ability to pay and even if you have no health insurance. Community Health Centers refer to diverse public and non-profit organizations and programs that receive federal funding under section 330 of the Public Health Service (PHS) Act, as amended by the Health Centers Consolidated Act of 1996 (P.L. 104-299) and the Safety Net Amendments of 2002.

Congestive heart failure (CHF)- or heart failure, is a condition in which the heart can't pump enough blood to the body's other organs.

Coronary artery disease (CAD)- occurs when the arteries that supply blood to the heart muscle (the coronary arteries) become hardened and narrowed. The arteries harden and narrow due to buildup of a material called plaque on their inner walls.

Cholesterol- a fatty substance manufactured by the body found in food made from animal products such as meats, fish, poultry, and dairy foods. High levels of blood cholesterol can contribute to coronary artery disease.

Diabetes (or diabetes mellitus)- A metabolic disorder resulting from insufficient production or utilization of insulin that commonly leads to cardiovascular complications.

Disability- a significantly restricted (or absent) ability, relative to an individual or group norm.

Emergency Medical Services (EMS)- The services provided to accident victims and patients suffering from severe acute illness and psychiatric emergencies. Services include the detection and reporting of medical emergencies, initial care, transportation and care for patients in route to health care facilities, medical treatment for the acutely ill and severely injured within emergency departments, and the provision of linkages to continued care or rehabilitation services.

Health disparities- differences in the burden and impact of disease among different populations, defined, for example, by sex, race or ethnicity, education, income, disability, place of residence, or sexual orientation.

Health outcomes- the results or consequences of a process of care. Health outcomes may include satisfaction with care as well as the use of health care resources. Included are clinical outcomes, such as changes in health status and changes in the length and quality of life as a result of detecting or treating disease.

Health risk appraisal (HRA)- an assessment of employee and other beneficiaries' health risks, interest in participating in specific programs, and readiness to change unhealthy lifestyle habits.

Health Maintenance Organization -An entity that provides, offers, or arranges for coverage of designated health services needed by plan members for a fixed, prepaid premium. There are four basic models of HMOs: group models, individual practice association, network model, and staff model. Under the Federal HMO Act, an entity must have three characteristics to call itself an HMO: 1) an organized system for providing health care or otherwise assuring health care delivery in a geographic area; 2) an agreed upon set of basic and supplemental health maintenance and treatment services; and 3) a voluntarily enrolled group of people.

Health Plan- A health maintenance organization, preferred provider organization, insured plan, self-funded plan, or other entity that covers health care services.

Health Plan Employer Data and Information Set (HEDIS)- A core set of comparable performance measures of managed care plans on quality, access, patient satisfaction, membership, utilization, finance, and descriptive information on health plan management and activities.

Healthy People 2010- A document that presents health-related goals and objectives for the United States, to be achieved by the year 2010.

Heart attack-A heart attack occurs when the blood supply to part of the heart muscle itself -- the myocardium -- is severely reduced or stopped. The medical term for heart attack is myocardial infarction.

Heart Disease and Stroke Prevention Program- a CDC program initiated in 1998 that supports states in their efforts to prevent heart disease and stroke. (For more information, see http://www.cdc.gov/cvh/state_program.)

Hypertension (high blood pressure) - High blood pressure, or hypertension, is defined in an adult as a systolic pressure of 140 mm Hg or higher and/or a diastolic pressure of 90 mm Hg or higher. Blood pressure is measured in millimeters of mercury (mm Hg).

Incidence- The number of new cases of a specific disease occurring during a certain period of time.

Indicator- A measurable factor which reflects or is highly correlated with either a health problem or outcome (e.g., infant mortality or disability days) or particular characteristics of health systems service delivery (e.g., cost per patient day, percent of area residents with a regular control course of care, or time or distance from primary care). A proxy indicator can be used to bring to light social or environmental conditions, values, interests and concerns.

JNC-7-an abbreviation for the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. This report, published in 2003, provides an evidence-based approach to preventing and managing hypertension.

Local Health Department -A governmental public health agency, which is in whole or in part responsible to a sub-state governmental entity or entities (e.g., a city, county, borough, township). A local health department employs one or more full-time professional public health employees (e.g., public health nurse, sanitarian), delivers public health services (e.g., immunization, food inspection), serves a definable geographic area, and has identifiable expenditures and/or budgets in the political subdivision(s) it serves.

Local Health District- A local governmental entity consisting of two or more towns that is responsible for the public health of its constituent towns.

Managed care- A system of health care delivery that influences utilization and cost of services and measures performance. The goal is a system that delivers value by giving people access to quality, cost-effective health care.

Managed health care plan- One or more products which integrate financing and management with the delivery of health care services to an enrolled population; employ or contract with an organized provider network which delivers services and which (as a network or individual provider) either shares financial risk or has some incentive to delivery quality, cost-effective services; and use an information system capable of monitoring and evaluating patterns of covered persons' use of medical services and the cost of those services.

Medicaid (Title XIX)- A Federally aided, State-operated and administered program that provides medical benefits for certain indigent or low-income persons in need of health and medical care. The program, authorized by Title XIX of the Social Security Act, is basically for the poor. It does not cover all of the poor, however, but only persons who meet specified eligibility criteria. Subject to broad Federal guidelines, states determine the benefits covered, program eligibility, rates of payment for providers, and methods of administering the program.

Myocardial infarction- The medical term for heart attack is myocardial infarction.

Morbidity- The extent of illness, injury, or disability in a defined population, expressed in general or specific rates of incidence or prevalence. Sometimes used to refer to any episode of disease.

Mortality rate- The mortality rate (death rate) expresses the number of deaths in a unit of population within a prescribed time and may be expressed as crude death rates (e.g., total deaths in relation to total population during a year) or as rates specified for disease and, sometimes, for age, sex, or other attributes (e.g., number of deaths from cancer in white males in relation to the white male population during a year).

Network- A defined group of providers, typically linked through contractual arrangements, which provide either specific benefits or a full range of acute and long term care services

P**olicy and environmental change**- An intervention approach to reducing the burden of chronic diseases that focuses on enacting effective policies (e.g., laws, regulations, formal and informal rules) or promoting environmental change (e.g., changes to economic, social, or physical environments).

Prevalence- The number of cases of a disease, infected persons, or persons with some other attribute present during a particular interval of time. Prevalence is often expressed as a rate.

Primary care- Basic or general health care focused on the point at which a patient ideally first seeks assistance from the medical care system. Primary care is considered comprehensive when the primary provider enters into a sustained partnership with the patient to take responsibility for the overall coordination for the care of the patient's health problems; biological, behavioral, or social. Physicians have traditionally provided the care, but, increasingly, it is provided by other personnel such as nurse practitioners or physician assistants.

Primary care physicians- Internists or general/family practitioners who treat a variety of medical problems across all patient age groups and who frequently serve as the patient's first point of contact with the health care system. In some cases, obstetricians, gynecologists, and pediatricians are considered primary care physicians.

Priority populations- a term that is defined as encompassing both specific population groups as well as geographically defined groups. They may include the following: low-income groups, racial and ethnic minority groups, women, children, elderly, and individuals with special health care needs.

Public health- One of the efforts organized by society to protect, promote, and restore the people's health. The combination of sciences, skills, and beliefs directed to the maintenance and improvement of the health of all the people through collective or social actions. A social institution, a discipline, and a practice with the goal to reduce the amount of disease, premature death, and disease-produced discomfort and disability in the population.

Quality of care- A measure of the degree to which delivered health care services meet established professional standards and judgments of value by the consumer. Quality may also be seen as the degree to which actions taken or not taken maximize the probability of beneficial health outcomes and minimize risk and other untoward outcome, given the existing state of medical science and art. Quality is frequently described as having three dimensions: quality of input resources, (certification, and/or training of providers); quality of the process of services delivery (the use of appropriate procedures for a given condition), and quality of outcome of service use (actual improvement in condition or reduction of harmful effects).

Quality of life- An expression that, in general, connotes an overall sense of well-being when applied to an individual and a pleasant and supportive environment when applied to a community. On the individual level, health-related quality of life (HRQOL) has a strong relationship to a person's health perceptions and ability to function. On the community level, HRQOL can be viewed as including all aspects of community life that have a direct and quantifiable influence on the physical and mental health of its members.

Reducing the Risk of Heart Disease and Stroke: A Six-Step Guide for Employers (CDC 6 Step Guide)- Guide for employers addressing how to reduce costs while investing in health and wellness. The guide list six essential steps for employers to take in order to understand and gain the benefits of investing in heart disease and stroke prevention in the workplace. Those steps are 1) Recognize the Costs, 2) Discover the Savings, 3) Learn from Other Employers, 4) Improve Cardiovascular Health and prevent heart disease and stroke at the worksite, 5) Work with your Health Plan and 6) Establish Partnerships.
Matson Koffman DM, Molloy M, Agin L, Sokler L. Reducing the Risk of Heart Disease and Stroke: A Six Step Guide for Employers. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; September 2005.

Rehabilitation- The combined and coordinated use of medical, social, educational, and vocational measures used for training or re-training individuals disabled by disease or injury to the highest possible level of functional ability.

Secondary CVD prevention- A set of interventions aimed at survivors of acute CVD events (e.g., heart attack, heart failure, stroke) or others with known CVD in which long-term case management is used to reduce disability and risk for subsequent CVD events.

Stroke- Occurs when a blood vessel that brings oxygen and nutrients to the brain bursts or is clogged by a blood clot or some other mass. Because of this rupture or blockage, part of the brain doesn't get the blood and oxygen it needs. Deprived of oxygen, nerve cells in the affected area of the brain can't work and die within minutes. And when nerve cells can't work, the part of the body they control can't work either. The devastating effects of a severe stroke are often permanent because dead brain cells aren't replaced. There are two main types of stroke. One (ischemic stroke) is caused by blockage of a blood vessel; the other (hemorrhagic stroke) is caused by bleeding. Bleeding strokes have a much higher fatality rate than strokes caused by clots.

Surveillance- The systematic collection, analysis, interpretation, and dissemination of health data to assist in the planning, implementation, and evaluation of public health interventions and programs.

Tissue plasminogen activator (tPA)- A thrombolytic agent (clot-busting drug). It's approved for use in certain patients having a heart attack or stroke. The drug can dissolve blood clots, which cause most heart attacks and strokes.

Utah Telehealth Network- The Utah Telehealth Network, UTN, links patients to health care providers across our state, country and world by using the most current telecommunications technology. Telehealth provides rural patients and providers with access to services that are usually available only in more populated urban areas. The Utah Telehealth Network uses interactive video to deliver patient care, provide continuing education to health professionals, and to facilitate administrative meetings.

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Appendix 5: Progress on Utah's Plan for Cardiovascular Health 2002-2005

Heart Disease and Stroke State Plan Progress Report July 2006

Awareness & Visibility Goal: Develop and implement media campaigns (radio, television and print) to inform and educate Utahns that cardiovascular disease is the leading cause of death, and a leading public health problem that must be addressed.

Outcomes

1. **Indicate below if each objective and strategy has been completed (C), is in progress (P), or has not been completed (NC).In the results section, document results of the stated evaluation.**

Awareness & Visibility Goal Impact Objective 1:

Increase awareness of heart disease as the leading cause of death in Utah, and that risk factors can be modified. (P)

Strategies:

- Establish knowledge base. (P)
- Publish and widely distribute a CVD Burden Report at least every three to four years. (C)
- Determine appropriate media channels to reach high risk populations. (P)
- Develop media campaigns at state and local levels to inform and educate Utahns about the burden of CVD and the importance of modifying risk factors to prevent or delay onset of disease. (P)
- Develop and test media messages. (P)
- Create a special section on website to address this issue. (C)
- Develop camera ready articles on risk factor management and control for distribution to managed care plans, worksites, etc. on a routine basis. (P)

Evaluation:

Documented change in knowledge base after campaign; changes in BRFSS data for Heart Disease and Stroke module for Utahns reporting making changes to prevent heart disease and stroke.

Results:

- Activities: partnered with the American Heart Association in the Go Red for Women Campaign; conducted a stroke awareness campaign (2205-2006); updated website and the heart disease specific section of the site.
- Among Utah adults, BRFSS data indicate:
  - The proportion with hypertension who were taking medication to reduce their high blood pressure increased from 60.0% (2001) to 69.3% (2005).
  - An additional 27.1% reported taking steps to reduce their blood pressure (i.e., exercising, reducing sodium intake, reducing alcohol intake, changing their eating habits) in 2005.
  - 52.8% of adults with high blood cholesterol were either taking medication or under a doctor's care for their cholesterol (2003).

Awareness & Visibility Goal Impact Objective 2:
Inform and educate Utahns about the signs and symptoms of heart attack and stroke, and inform that both are 9-1-1 medical emergencies. (P)

Strategies:
- Determine appropriate media channels to reach high risk populations. (P)
- Develop media campaigns at state and local levels to inform and educate Utahns about the signs and symptoms of heart attack and stroke (including the differences in symptoms between the two, and gender differences in heart attack symptoms), and inform that both are 9-1-1 medical emergencies. (P)
- Develop tools for providers to educate at-risk patients (e.g. 9-1-1 plan prescription pads). (P)
- Provide refrigerator magnets and incentive items to providers to promote knowledge of symptoms and 9-1-1 awareness. (P)
- Create a special section on website to address this issue. (C)
- Develop camera-ready articles on risk factor management and control for distribution to managed care plans, worksites, etc. on a routine basis. (P)

Evaluation:
Changes in BRFSS Heart Attack and Stroke Module in Utahns reporting knowing the signs and symptoms of heart attack and stroke, and who would call 9-1-1 if symptoms occurred; changes in pre-transport deaths in Utahns (excluding nursing home deaths) for heart attack and stroke.

Results:
- Activities: The target population of men and women over the age of 55 was determined and channels selected accordingly. Stroke 9-1-1 Campaign was developed to address lack of knowledge of signs and symptoms of stroke and the importance of calling 9-1-1 including 8 different TV commercials, brochures in English and Spanish with refrigerator magnets, posters, print ads, and radio ads. The website was updated to include stroke and stroke campaign specific information.
- BRFSS data indicate that the proportion of Utah adults:
  - Who know the signs and symptoms for heart attack has decreased from 39.4% (2001) to 33.5% (2005).
  - Who would call 9-1-1 for heart attack decreased from 33.9% (2001) to 28.5% (2005).
  - Who know the signs and symptoms of stroke increased from 44.7% in 2001 to 46.5% in 2005.
  - Who would call 9-1-1 for stroke increased from 38.0% (2001) to 39.9% (2005).
- The proportion of adults who died pre-transport (excluding nursing homes) from stroke increased from 21.3% (2001) to 32.9% (2004).
- The proportion of adults who died pre-transport (excluding nursing homes)from heart attack increased from 27.3% (2001) to 33.6% (2004).

Awareness & Visibility Goal Impact Objective 3:
Inform and educate Utahns about the link between lifestyle choices and control of high blood pressure and high cholesterol. (P)

Strategies:
- Determine appropriate media channels to reach high risk populations. (P)
- Develop media campaigns at state and local levels to inform and educate Utahns about the link between lifestyle choices and control of high blood pressure and high cholesterol. (P)
- Develop exhibits, presentations, and special events during February Heart Month, May High Blood Pressure Month, and September High Blood Cholesterol Month. (P)
- Create a special section on website to address this issue. (C)
- Develop camera ready articles on risk factor management and control for distribution to managed care plans, worksites, etc. on a routine basis. (P)

Evaluation:
Changes in BRFSS reported lifestyle risk factors; prevalence of respondents with high blood pressure/ cholesterol.

Results:
- Activities: Participated with the AHA in the Go Red for Women Campaign by involving local health departments, businesses, the media, etc.; Updated the website with information on healthy living through addressing major risk factors.
- BRFSS data indicate that the proportion of Utah adults:
  - Getting the recommended level of physical activity increased from 53.77% (2001) to 55.01% (2005).
  - Consuming at least 5 fruits and vegetables a day increased from 20.625 (2002) to 22.06%(2005).
  - Who are obese increased from 19.0% (2002) to 22.1% (2005).
  - Who report having high blood pressure decreased from 22.3% (2001) to 18.9% (2005).
  - Who report having high cholesterol increased from 21.0% (2001) to 22.0% (2005).

2. List Active Partners/Agencies working on this goal (put asterisk next to new partners/ agencies) and describe how these partners have contributed to, or participated in activities related to this goal:
- American Heart Association- Red Dress for Women Campaign
- American Stroke Association-Stroke Task Force* -The Stroke Task Force has provided advice on the development of the Stroke Campaign, has helped identify and recruit community participants to participate in interviews and ads.
- Love Communications - has produced radio and television ads, facilitated public relations activities, developed print collateral materials
- Local Health Departments – conducted campaigns in local areas of the state
- Utah employers – developing worksite wellness coalitions that are developing employee programs to impact blood pressure and cholesterol levels

Capacity Goal: Increase the ability of health care providers and patients to effectively manage high blood pressure, high blood cholesterol and congestive heart failure.

Outcomes

1. **Indicate below if each objective or strategy has been completed (C), is in progress (P), or has not been completed (NC).In the results section, document results of the stated evaluation.**

Capacity Impact Objective 1:
Develop and nurture partnerships with providers, health plans, and other professionals to establish a working relationship between primary care and public health. (P)

Strategies:
- Identify providers serving high-risk populations in Utah. (P)
- Identify barriers faced by providers and patients in treating and controlling these conditions.(P)
- Identify needs of providers and patients that should be addressed in any capacity building program. (P)

Evaluation:
Documented barriers and needs of patients and providers; working relationships with Community Health Centers, Medicaid providers, managed care plans, etc.

Results:
- Relationships with community health centers are being developed through a partnership with the Association of Utah Community Health (AUCH).
- The state HDSPP has developed partnerships with Select Health (the state's largest health insurer) and Molina Health Care (Medicaid managed care plan) to improve patient and provider education in relation to hypertension. Focus groups were conducted in 2002 with physicians and hypertensive patients that provide insight into the barriers and needs of patients and providers.

Capacity Impact Objective 2:
Provide technical assistance, training, public health resources, and connections in the community to enhance providers' progress in high blood pressure, high blood cholesterol, and congestive heart failure treatment and control. (P)

Strategies:
- Participate in Community Health Center (CHC) Cardiovascular Disease (CVD) Collaborative. (P)
- Assist in obtaining resources to improve quality of care in rural areas. (P)
- Partner with Utah Medical Association, Intermountain Health Care (IHC), and other provider organizations to develop professional education programs for rural professional community outreach. (P)
- Seek funding from partner agencies to enhance quality of care and variety of heart disease and stroke prevention services offered. (NC)
- In partnership with major managed care providers in Utah, develop and implement a kit in Spanish and English for newly diagnosed persons with hypertension to promote self-management of the condition. (C)
- Develop and disseminate tools for providers to use with patients to improve blood pressure monitoring. (P)
- Develop and promote self-management tracking tools to be used by patients.(P)

- Promote inclusion of CHCs in Healthy Communities Committees, enhancing their visibility within the community. (P)
- Ensure that partner agencies' health providers receive training in measurement and management of hypertension. (P)
- Provide kits and training to partner agencies on implementing the DASH diet for hypertension management.(P)

Evaluation:
- Changes in the HEDIS measures for high blood pressure and high cholesterol control;
- Number of CHCs participating in the CVD Collaborative;
- Number of CHCs participating in the CVD Collaborative reaching their goals;
- Number of agencies/providers participating in the programs;
- Number of hypertension kits distributed; and
- Number of rural health care providers receiving outreach education.

Results:
- Changes in the HEDIS measures for high blood pressure and high cholesterol control;
  - o BP control- Medicaid plans: 53.5% (2001) to 70.6% (2006)
  - o BP control-Commercial plans: 56.8% (2001) to 72.1% (2006)
  - o LDL <130, following an acute event-Medicaid plans:0% (2001) – 26.0% (2006)
  - o LDL<130, following an acute event-Commercial plans: 44.5% (2001) – 65.1% (2006)
- Number of CHCs participating in the CVD Collaborative: An agreement is in place with AUCH to act as a liaison between the HDSPP and the CHCs.To date, eight CHCs have agreed to participate in the CVD Collaborative.
- Number of CHCs participating in the CVD Collaborative reaching their goals: (P)
- Number of agencies/providers participating in the programs:220 providers attended the 2006 Stroke Symposium; 55 providers attended "Get With The Guidelines" workshops; 450 providers attended hypertension continuing education sessions.
- Number of hypertension kits distributed: Approximately 9,000 kits
- Number of rural health care providers receiving outreach education: 45 providers

Capacity Impact Objective 3:
Ensure that high-risk patients with diabetes, or those with pre-diabetes, receive priority education and care, and develop skills to reduce heart disease and stroke risk factors. (NC)

Strategies:
- In collaboration with the Utah Department of Health Diabetes Control Program, develop a training program to include secondary prevention of heart disease and stroke risk factors in diabetes care plans. (NC)

Evaluation:
Prevention of heart attack and stroke risk factors is included in diabetes education plans and training is provided to diabetes educators.

Results: (NC)

Capacity Impact Objective 4:
Enhance the capacity of the Utah transport system and care facilities to treat stroke as an acute emergency. (P)

Strategies:
- Partner with Operation Stroke.(C)
- Assess the current status of acute stroke transport and treatment. (C)
- Assist in establishing a stroke network or consortium. (C)
- Apply for funding for a TriState (California, Nevada, and Utah) conference on developing a "Chain of Survival" strategy for stroke, from symptoms to rehabilitation. (C)

Evaluation:
Comparison of baseline data and data collected in five years; existence of a stroke network; existence of "stroke centers"; and number of attendees at conference.

Results:
- Partnership with Operation Stroke resulted in a survey of the state's hospital's capabilities to treat stroke being completed.A more detailed survey of hospital capabilities is being considered by the Stroke Task Force.
- A Stroke Task Force has been established by the AHA and HDSPP. The task force has sponsored three annual Stroke Symposia (2004, 2005, 2006), and plans to do another in 2007.
- Three hospitals are now certified by JCAHO as stroke centers (LDS Hospital, University of Utah Health Sciences Center, and Utah Valley Regional Medical Center).A fourth hospital is scheduled to have its JCAHO review in December 2006.
- Applied for the Tri-State Stroke Network funding but did not receive the award.Funding has now been discontinued.

2. **List Active Partners/Agencies working on this goal (put asterisk next to new partners/ agencies) and describe how these partners have contributed to, or participated in activities related to this goal:**
- American Stroke Association-Stroke Task Force* -The Stroke Task Force has held a Stroke Symposium annually for the past three years and is presently working on acute stroke care. The Stroke Task Force recently developed sub-committees in an effort to expand into different specialties for which there is representation. The sub-committees are: Acute Care, Caregivers of Stroke, Rehab and Prevention, Community, and EMS. Each group is currently writing objectives for the upcoming year.
- Association of Utah Community Health* - the partnership with AUCH will enable the HDSPP to provide resources and support to CHCs that are participating in the CVD Collaborative.This will include patient self-management education materials, provider education, analysis of data, reminders systems, etc.
- SelectHealth* and Molina Health Care* – collaborated on provider and patient education on hypertension.

Policy Goal: Identify need and promote policy changes in health care systems.

1. **Indicate below if each strategy has been completed (C), is in progress (P), or has not been completed (NC).In the results section, document results of the stated evaluation.**

Policy Impact Objective 1:
Develop system changes that contribute to better control of risk factors for heart disease and stroke, especially high blood pressure, high cholesterol, and obesity. (P)

Strategies:
- Encourage health plans to provide blood pressure monitoring services free of charge to subscribers. (C)
- Disseminate and promote adherence to the American Heart Association Guidelines for Primary and Secondary Prevention of Heart Disease and Stroke. (P)
- Develop ideas for incentives for providers who adhere to guidelines. (NC)

Evaluation:
- Changes in HEDIS measures for blood pressure and cholesterol;
- Number of health care plans documenting use of guidelines and using incentives.

Results:
- Activities:Contracts with SelectHealth and Molina to provide physician continuing medical education on the AHA Guidelines; SelectHealth developing provider incentive programs.
- Free BP checks provided at IHC Insta-Care facilities and other local hospitals.
- Changes in the HEDIS measures for high blood pressure and high cholesterol control:
  - BP control- Medicaid plans: 53.5% (2001) to 70.6% (2006)
  - BP control-Commercial plans: 56.8% (2001) to 72.1% (2006)
  - LDL <130, following an acute event-Medicaid plans:0% (2001) – 26.0% (2006)
  - LDL<130, following an acute event-Commercial plans: 44.5% (2001) – 65.1% (2006)
- Health plans documenting use of guidelines and incentives: NA.

Policy Impact Objective 2:
Inform and educate hospital systems about the American Heart Association Get With the Guidelines for Heart Disease and Stroke and promote implementation by leading care corporations in Utah.

Strategies:
- Partner with the American Heart/Stroke Association and provide a conference to introduce the Get With the Guidelines for Heart Attack and Stroke to major hospitals in Utah.(C)
- Provide grants to hospitals who would like to implement the program but do not have the funding.(C)
- Assist with training of professionals for program implementation. (P)

Evaluation:
All major hospitals in Utah have guidelines in place for treatment and discharge care for heart attack and stroke patients.

Results:
- Activities:HDSPP provided financial support and educational workshops to Utah hospitals to use the GWTG tool;Two GWTG-Stroke workshops were held in 2005/2006.
- Nine Utah hospitals currently use (or have used in the past) the GWTG for Stroke tool to implement protocols for acute stroke care and to track data on a continuing basis.
- Third annual Stroke Symposium was held in March 2006 and 225 people attended.
- There are three JCAHO certified primary stroke centers in the state (LDS Hospital, University of Utah Health Sciences Center and Utah Valley Regional Medical Center).A fourth (McKay-Dee) hospital will be reviewed in December 2006.

Policy Impact Objective 3:
Ensure that all areas in Utah have access to 9-1-1 and enhanced 9-1-1 by 2005. (P)
Strategies:
- Partner with Emergency Medical Services and American Heart Association to develop appropriate advocacy actions to ensure coverage. (C)
- Develop education program for state and local partners to ensure that 9-1-1 issues are well understood. (C)

Evaluation:
Utah has complete access to enhanced 9-1-1 by 2005.

Results:
- With the exception of a few frontier counties (parts of Daggett, Piute, Wayne) Utah has complete enhanced 9-1-1 service.A plan has been developed to address this issue.

Policy Impact Objective 4:
Ensure that all Utahns have access to emergency medical care for treatment of heart attack or stroke. (P)

Strategies:
- Working with Medicaid, Community Health Centers (CHCs) and the Primary Care Network, develop an inventory of reimbursement and policies for emergency care for heart attack and stroke, and support changes that may need to be made. (NC)
- Promote and support local health department (LHD) partnerships with emergency medical services in distribution and training programs for automated external defibrillators (AEDs). (P)

Evaluation:
Assurances in place that no Utahn will be denied emergency care for heart attack and stroke.

Results:
- Utah Bureau of Emergency Medical Services has received a grant from HRSA to provide AEDs to rural agencies.All LHDs have received grant applications and encouragement to apply for the funding.LHDs have also received lists of resources to provide training on the use of AEDs.

2.**List Active Partners/Agencies working on this goal (put asterisk next to new partners/ agencies) and describe how these partners have contributed to, or participated in activities related to this goal:**
- Bureau of Emergency Medical Services* – obtained funds to grant to LHDs for AED purchase, placement and training.
- American Heart Association – provides training, funding and resources (i.e., speakers) as well as technical assistance.
- SelectHealth* and Molina Health Care* – administer hypertension quality improvement projects with members and providers.

Appendix 6: Cross-walk of Plan Objectives with Healthy People 2010 Objectives

Healthy People 2010 Objectives	Com Obj 1	Com Obj 2	Com Obj 3	Health Care Obj 1	Health Care Obj 2	Health Care Obj 3	Health Care Obj 4	Health Care Obj 5	Health Care Obj 6	Health Care Obj 7	Work Site Obj 1	Work Site Obj 2	Work Site Obj 3	Work Site Obj 4
12-1. Reduce coronary heart disease deaths.									✓					
12-2. Increase the proportion of adults who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 911.			✓								✓			
12-3.Increase the proportion of eligible patients with heart attacks who receive artery-opening therapy within an hour of symptom onset.					✓				✓					
12-4. Increase the proportion of adults aged 20 years and older who call 911 and administer CPR when they witness an out-of-hospital cardiac arrest.			✓											✓
12-5. Increase the proportion of persons with witnessed out-of-hospital cardiac arrest who are eligible and receive their first therapeutic electrical shock within 6 minutes after collapse.			✓						✓					✓
12-7. Reduce stroke deaths.						✓			✓	✓				
12-8. Increase the proportion of adults who are aware of the early warning symptoms and signs of a stroke.			✓											
12-9. Reduce the proportion of adults with high blood pressure.				✓			✓	✓			✓	✓	✓	
12-10. Increase the proportion of adults with high blood pressure whose blood pressure is under control.				✓			✓	✓			✓	✓	✓	
12-11.Increase the proportion of adults with high blood pressure who are taking action (for ePample losing weight, increasing physical activity, reducing sodium intake) to help control their high blood pressure.		✓		✓			✓	✓			✓	✓	✓	✓
12-12. Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high.				✓			✓	✓			✓	✓	✓	
12-13.Reduce the mean total blood cholesterol levels among adults.		✓		✓			✓	✓			✓	✓	✓	✓

Healthy People 2010 Objectives	Com Obj 1	Com Obj 2	Com Obj 3	Health Care Obj 1	Health Care Obj 2	Health Care Obj 3	Health Care Obj 4	Health Care Obj 5	Health Care Obj 6	Health Care Obj 7	Work Site Obj 1	Work Site Obj 2	Work Site Obj 3	Work Site Obj 4
12-14. Reduce the proportion of adults with high total blood cholesterol levels.		✓		✓			✓	✓			✓	✓	✓	✓
12-15. Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.				✓			✓	✓			✓	✓	✓	
12-16. Increase the proportion of persons with coronary heart disease who have their LDL-cholesterol level treated to a goal of less than or equal to 100 mg/dl.				✓			✓	✓			✓	✓	✓	

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